PROMISE®
TECHNOLOGY, INC.

SATAII150
TX2plus and TX4
User Manual

Version 1.3

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Recommendations

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Chapter 1: Introduction

- About This Manual, below
- Overview (page 2)
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Thank you for purchasing Promise Technology's SATAII150 TX2plus or TX4 Serial ATA Controller card.

About This Manual

This *User Manual* describes how to setup, use and maintain the SATAII150 TX2plus or TX4 Serial ATA Controller cards.

This manual includes a full table of contents, chapter task lists and cross-references to help you find the specific information you are looking for.

Also included are four levels of notices:

Note

A *Note* provides helpful information such as hints or alternative ways of doing a task.

Important

An *Important* calls attention to an essential step or point required to complete a task. Important items include things often missed.

Caution

A *Caution* informs you of possible equipment damage or loss of data and how to avoid them.

Warning

A *Warning* notifies you of probable equipment damage or loss of data, or the possibility of physical injury, and how to avoid them.

Overview

The PC which you are using either already contains a SATAII150 TX2plus or TX4 Serial ATA Controller card installed by a third-party or you have acquired a SATAII150 TX2plus or TX4 retail product for your existing PC and plan to install the card yourself.

- For PC owners wishing to install their SATAII150 TX2plus or TX4 Controller card, go to *Chapter 2: Installation* on page 5.
- For PCs with a SATAII150 TX2plus or TX4 Controller card already installed, and you are experiencing any difficulties with the disk drives being recognized by the card, go to *Chapter 6: Troubleshooting* on page 51.
- If your operating system has crashed for some reason or you have downloaded updated drivers from the Promise website (www.promise.com), you may wish to reinstall software drivers for the SATAII150 TX2plus or TX4 controller card. See *Chapter 3: Installing Drivers* on page 33.

SATAII150 TX2plus and TX4

Promise originally designed the SATAII150 TX2plus or TX4 as a cost-effective, high performance controller cards that add performance and/or reliability to PC desktops and/or servers using Serial ATA drives.

SATAII150 TX2plus has two independent data channels to support a maximum of two Serial ATA drives plus a maximum of two Parallel ATA drives.

SATAII150 TX4 has four independent data channels to support a maximum of four Serial ATA drives.

The SATAII150 TX2plus and TX4 are Controller cards only. They are not capable of creating a Redundant Array of Independent Disks (RAID). For comparable products with RAID capability, consider the Promise FastTrak TX2200 and TX4200 Serial ATA RAID Controller cards.

Specifications

- Low-profile printed circuit board
- PCI Slot 33MHz or 66MHz
- Controller card dimensions
  TX2 (HWD): 2.25 x 4.69 x 0.33 inches (57 x 119 x 8 mm)
  TX4 (HWD): 2.25 x 6.28 x 0.33 inches (57 x 160 x 8 mm)
- Operating temperatures: 32° to 110°F (0°C to 45°C)
- Operating himidity: 5% to 85% non-condensing

Key Features and Benefits

The following information offers an overview of the major features of your new Promise SATAII150 TX2plus and TX4.

Advanced Hardware Design	
Features	**Benefits**
Supports 66MHz PCI bus motherboards (automatically backward compatible with 33MHz PCI slots)	Allows maximum data transfers of up to 266MB per second (133 MB/s in 33 MHz slot) over the bus to dramatically reduce the time to save and retrieve large files.
Supports Serial ATA Specification 1.0	Burst data transfer rates up to 150MB/sec from Serial ATA drives to boost overall system performance.
Independent data channels for Serial ATA drives	Drives can multiply their data transfer performance when striped together and each drive uses a separate data channel.
Master/slave data channel for Parallel ATA drives	Conventional master/slave arrangement allows two disk drives on one controller port.
PCI Plug-n-Play, PCI Interrupt sharing and coexists with motherboard IDE and SCSI controllers	Easy to install; supports up to 4 Serial ATA drives on the SATAII150 TX4 Controller card while still supporting 4 devices on motherboard ATA controller.
Supports S.M.A.R.T. monitoring and reporting	Polls status every 15 minutes, reports through PAM, Linux CLI and SNMP
Employs the latest Promise PCI Serial ATA ASIC technology	Fully supports Serial ATA specifications with 150 MB/sec timing and CRC error-checking at high speeds.
DOS based flash upgrade of BIOS and Firmware	Verifies proper file, option to backup existing file. Download files from Promise website
SATAII150 Configuration Utility for Windows	Installed automatically, appears as a taskbar icon, use for controller monitoring, firmware upgrades, drive information and SMART status.

Compatibility	
Features	**Benefits**
Complies with PCI v2.3 Local Bus standard	Provides highest level of hardware compatibility.
Complies with SATA Specification 1.0	Provides full compatibility with first generation Serial ATA hard drives.
Complies with SATA II Specification 1.0 – Extensions to Serial ATA 1.0	Provides enclosure and drive monitoring compatibility.
Compliant with PCI Bus Master standard. PCI Bus Master support	Provides 32-bit I/O and, Bus Master, and Ultra ATA performance for optimal system performance.
Tested compatibility to coexist with motherboards that have integrated IDE controllers	Improves system performance and minimizes system conflicts for new and existing installations.
Compatible with all major SATA generation 1 and SATA generation 2, phase 1 disk drives	Promise performs verification testing with major drive manufacturers and development partners.
Features LBA support	Supports drives greater than 137 GB capacity.
Supports BIOS Boot Specification	All arrays attached to the SATAII150 card appear in the BBS-compliant motherboards BIOS boot list.
Compatible with Promise SuperSwap enclosures	Provides enclosure management including fan, temperature and voltages.
Multiple OSes Supported	Windows Server 2003, XP, 2000 RedHat Linux SuSE Linux

Chapter 2: Installation

- Unpack Your SATAII150 Card, below
- Install the SATAII150 Card (page 6)
- Install the Disk Drives: TX2plus (page 7)
- Install the Disk Drives: TX4 (page 9)

This section is designed to quickly get your SATAII150 TX2plus or TX4 Serial ATA controller card up and running.

Unpack Your SATAII150 Card

When you receive the SATAII150 TX2plus card, the package should contain the items listed below:

- SATAII150 TX2plus Serial ATA Controller card
- Quick Start Guide
- SATAII150 TX2plus driver diskette with Windows drivers
- Two 0.65 m (26 inch) Serial ATA data cables
- One 80-wire 40-pin ATA cable
- CD with drivers and *SATAII150 TX2plus, TX4 User Manual*

When you receive the SATAII150 TX4 card, the package should contain the items listed below:

- SATAII150 TX4 Serial ATA Controller card
- Quick Start Guide
- SATAII150 TX4 driver diskette with Windows drivers
- Four 0.65 m (26 inch) Serial ATA data cables
- CD with drivers and *SATAII150 TX2plus, TX4 User Manual*

If ANY of the contents are missing or appear to be damaged, please contact your dealer or distributor immediately.

Warning

Before installing the adapter into an existing system, backup any important or useful data. Failure to follow this accepted PC practice could result in data loss.

Warning

The SATAII150 TX2plus and TX4 Serial ATA Controller cards, like other parts of your system, are subject to damage by static electricity. Be sure that you're properly grounded (Promise recommends that you wear an anti-static strap or touch a grounded object) and that you unplug your system before installing the SATAII150 TX2plus and TX4.

Install the SATAII150 Card

The SATAII150 TX2plus or TX4 Serial ATA Controller card fits into any available PCI slot on your PC's motherboard (below):

• 32-bit PCI slot (must be PCI 2.2 or 2.3 compliant)

• The 32-bit portion of a 64-bit PCI slot
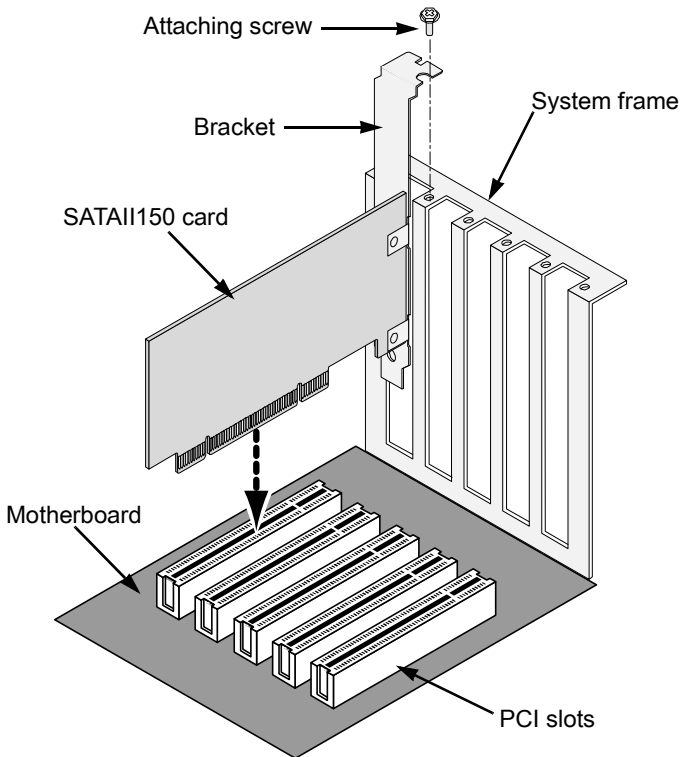
1. Remove the cover of your system.

2. Remove the inside slot cover of an available 32-bit PCI slot on the motherboard.Install the SATAII150 card into the open PCI slot. Secure the bracket to the system's frame.

3. Attach your system case's 2- or 4-pin LED cable to the LED connector on the SATAII150 card (see *Install the Disk Drives*, below). Make sure that pin 1 on the connector is aligned with pin 1 of the cable.

4. Fasten the controller card bracket to the system case.

Note

The SATAII150 TX2plus and TX4 Controllers are PCI Plug-n-Play (PnP) devices. No changes are necessary in the Motherboard CMOS Setup for resources or drive types in most applications.

Install the Disk Drives: TX2plus

The SATAII150 TX2plus supports up to two Serial ATA drives and up to two Parallel ATA drives.

Caution

Use of removable disk drive enclosures other than Promise Technology's SuperSwap is not supported and may result in performance loss or other undesired results.

Note

If you are using a Promise SuperSwap 1100 or 4100 enclosure in your PC:
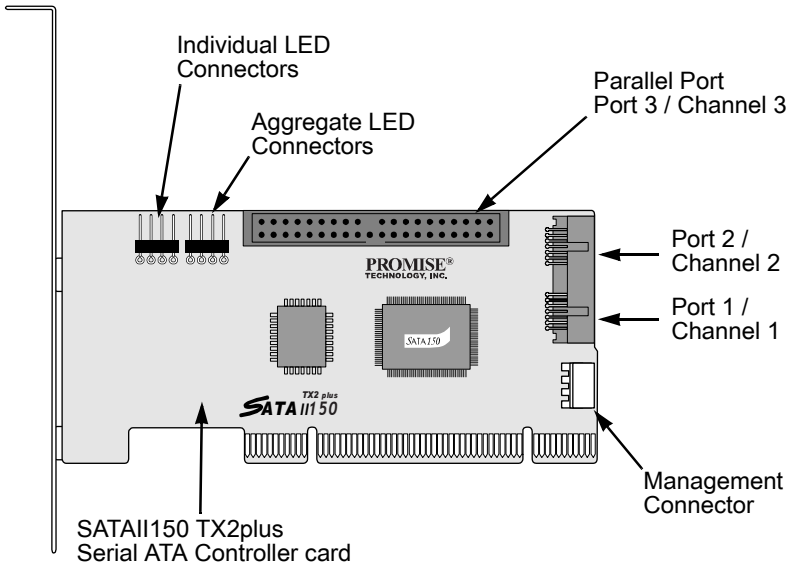
•   Connect the power cables to the SuperSwap enclosure.

•   Attach a SMBus cable from the Management Connector on the SATAII150 TX2plus card to the Management Connector on the first enclosure

These actions are described in Chapter 2 of the SuperSwap *User Manual*.

1. Install the disk drives into the drive bays of your system.

2. Attach the power cables to the disk drives.

3. Attach one Serial ATA data cable to each Serial ATA disk drive. Then attach the other ends of the cables to the connectors on the SATAII150 TX2 plus card (below).

Individual LED Connectors

Aggregate LED Connectors

Parallel Port
Port 3 / Channel 3

Port 2 / Channel 2

Port 1 / Channel 1

Management Connector

SATAII150 TX2plus
Serial ATA Controller card

4. Attach a black connector of the Ultra ATA cable to each Parallel ATA hard drive.
5. Verify that the Master and Slave drives each have the appropriate pin settings. Check the drive manufacturer's documentation for more information.
6. Attach the blue cable connector to the Port 3 Parallel connector on the SATAII150 TX2plus controller card. The colored edge of the cable(s) indicates pin 1.

Install the Disk Drives: TX4

The SATAII150 TX4 supports up to four Serial ATA drives.

	Caution
⚠️	Use of removable disk drive enclosures other than Promise Technology's SuperSwap is not supported and may result in performance loss or other undesired results.

|	**Note**
📝	If you are using a Promise SuperSwap 1100 or 4100 enclosure in your PC: • Connect the power cables to the SuperSwap enclosure. • Attach a SMBus cable from the Management Connector on the SATAII150 TX4 card to the Management Connector on the first enclosure These actions are described in Chapter 2 of the SuperSwap *User Manual*.

1. Install the disk drives into the drive bays of your system.
2. Attach the power cables to the disk drives.

3.   Attach one Serial ATA data cable to each Serial ATA disk drive. Then attach the other ends of the cables to the connectors on the SATAII150 TX4 card (below).
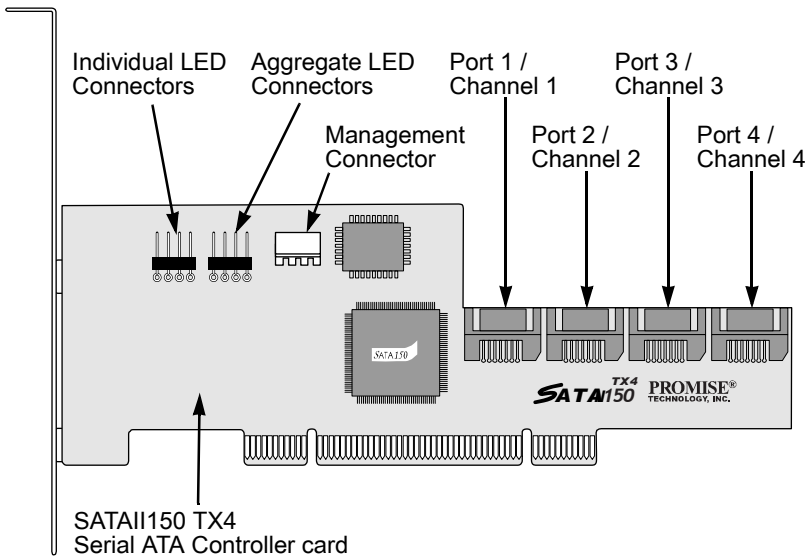
Chapter 3: Install Drivers

Following are driver installation procedures for the Windows operating systems that support the SATAII150 TX2plus and TX4 Serial ATA Controller cards. The SATAII150 drivers for Windows are included on the driver diskette.

Drivers and installation instructions for Linux operating systems are downloadable from the Promise website at www.promise.com.

Windows Server 2003

New Installation

The following details the installation of the SATAII150 Serial ATA Controller drivers while installing Windows Server 2003.

1. Start the installation:
   - Floppy Install: Boot the computer with the Windows Server 2003 installation diskettes.
   - CD-ROM Install: Boot from the CD-ROM. Press F6 after the message "Press F6 if you need to install third party SCSI or RAID driver" appears.
2. When the Windows Server 2003 Setup window is generated, press S to specify an Additional Device(s).
3. Insert the SATAII150 driver diskette into drive A: and press Enter.
4. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen, and then press the Enter.
5. Press S to use the driver on the floppy disk and then press Enter to continue with installation.
6. The Windows Server 2003 Setup screen will appear again saying "Setup will load support for the following mass storage devices:" The list will include "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller".

   NOTE: If there are any additional devices to be installed, specify them now. When all devices are specified, continue to the next step.
7. From the Windows Server 2003 Setup screen, press the Enter. Setup will now load all device files and then continue the Windows Server 2003 installation.

Existing Installation

After installing the STAII150 Serial ATA Controller card and rebooting your system, Windows Server 2003 setup will show a "Found New Hardware" dialog box. Under Windows 2003, "Mass Storage Controller" will be displayed.

1. Insert the SATAII150 driver diskette into the A:\ drive.
2. Choose *Install the software automatically* and press the Enter key.
3. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen, and then press the Enter key.
4. If using a driver that has not been digitally signed by Microsoft, you will be asked if you want to continue the installation. Click Continue anyway.
5. When the New Hardware Wizard has finished installing the SATAII150 driver, click Finish.

Confirm Installation

1. Right-click on the My Computer icon and select Manage from the popup menu.
2. From the left panel, select Device Manager.
3. Click the "+" in front of SCSI and RAID controllers. "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller" should appear.

Windows XP

New Installation

The following details the installation of the SATAII150 Serial ATA Controller drivers while installing Windows XP.

1. Start the installation:
   - Floppy Install: Boot the computer with the Windows XP installation diskettes.
   - CD-ROM Install: Boot from the CD-ROM. Press F6 after the message "Press F6 if you need to install third party SCSI or RAID driver" appears.
2. When the Windows XP Setup window is generated, press S to specify an Additional Device(s).
3. Insert the SATAII150 driver diskette into drive A: and press Enter.
4. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen, and then press the Enter.
5. Press S to use the driver on the floppy disk and then press Enter to continue with installation.
6. The Windows XP Setup screen will appear again saying "Setup will load support for the following mass storage devices:" The list will include "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller".

   NOTE: If there are any additional devices to be installed, specify them now. When all devices are specified, continue to the next step.
7. From the Windows XP Setup screen, press the Enter. Setup will now load all device files and then continue the Windows XP installation.

Existing Installation

After installing the SATAII150 Serial ATA Controller card and rebooting your system, Windows XP setup will show a "Found New Hardware" dialog box.

1. Insert the SATAII150 driver diskette into the A:\ drive.
2. Choose Install the software automatically and press the Enter key.
3. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen, and then press the Enter key.
4. If using a driver that has not been digitally signed by Microsoft, you will be asked if you want to continue the installation. Click Continue anyway.
5. When the New Hardware Wizard has finished installing the SATAII150 driver, click Finish.

Confirm Installation

1. Right-click on the My Computer icon and select Manage from the popup menu.
2. From the left panel, select Device Manager.
3. Click the "+" in front of SCSI and RAID controllers. "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller" should appear.

Windows 2000

New Installation

The following details the installation of the SATAII150 Serial ATA Controller drivers while installing Windows 2000.

1. Start the installation:
   - Floppy Install: Boot the computer with the Windows 2000 installation diskettes.
   - CD-ROM Install: Boot from the CD-ROM. Press F6 after the message "Press F6 if you need to install third party SCSI or RAID driver" appears.

2. When the Windows 2000 Setup window is generated, press S to specify an Additional Device(s).

3. Insert the SATAII150 driver diskette into drive A: and press Enter.

4. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen then press Enter.

5. The Windows 2000 Setup screen will appear again saying "Setup will load support for the following mass storage devices:" The list will include "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller".

   NOTE: If there are any additional devices to be installed, specify them now. When all devices are specified, continue to the next step.

6. From the Windows 2000 Setup screen, press Enter. Setup will now load all device files and then continue the Windows 2000 installation.

Existing Installation

After installing the SATAII150 Serial ATA Controller card and rebooting your system, Windows 2000 setup will show a "New Hardware Found" dialog box. Under Windows 2000, "PCI Mass Storage Controller" will be displayed.

1. Choose Add New Hardware Wizard from the list, and then press Enter.
2. Choose Add/Troubleshoot a device and click Next. The new hardware wizard will show device list
3. Choose Mass Storage controller and click Next. At the following screen click Finish.
4. Choose Display a list the known drivers for this device so that I can choose a specific driver then click Next.
5. When the Windows 2000 supported SCSI adapter drivers list appears, click Have disk.
6. Insert the SATAII150 driver diskette in drive A:\.
7. Type A:\Win2000 in the text box. Click OK.
8. Choose *Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller* from the list that appears on screen, then click Next.
9. Click Yes to confirm continue the installation and copy the driver to system.
10. Remove the diskette and click Finish to restart the system. Windows 2000 will then restart for the driver installation to take effect.

Confirm Installation

1. Right-click on the My Computer icon and select Manage from the popup menu.
2. From the left panel, select Device Manager.
3. Click the "+" in front of SCSI controllers. "Windows Promise SATAII150 TX2plus [or TX4] (tm) IDE Controller" should appear.

RedHat Linux

Prepare a driver diskette:

1. Download the RedHat Linux driver from the Promise website at www.promise.com

2. Extract the contents of the ZIP file on to a formatted floppy disk. Use WinZIP in Windows or unzip in Linux.

3. Label the disk "SATAII 150 Driver Disk".

New Installation

1. Boot the Linux system from the Red Hat Linux Installation with CD.

   At the "Welcome to Red Hat linux ..." installation screen, a prompt labeled "boot:" will appear at the bottom of the screen.

2. At the boot prompt, type **expert** and press the Enter key.
   See the Note below.

3. At the Devices dialog box, insert the SATAII 150 Driver Disk in the floppy drive and then select OK or Yes.

4. Continue with the installation as normal.

5. When installation is at the Congratulations menu, press Ctrl-Alt-F2 to switch screens.

6. Insert the SATAII 150 Driver Disk into the floppy drive.

7. Type the following commands to load SATAII 150 driver:

   # umount /tmp/fd0 (if this command fails, ignore it and go to the next one)

   # chroot /mnt/sysimage

   # mount /dev/fd0 /mnt

   # cd /mnt

   # sh setup-ut

   # cd /

   # umount /mnt

   # exit

8. Please Press Ctrl-Alt-F7 and click the Exit button to finish the installation.

NOTE: Red Hat Linux will not provide onboard IDE as standard ide0 and ide1 on some mother boards. To solve this condition, append the boot parameters as follows.

ide0=0x1f0,0x3f6,14 ide1=0x170,0x376,15 ide2=0 ide3=0 ide4=0 ide5=0 ide6=0 ide7=0 ide8=0 ide9=0

Existing Installation

1. Boot the Linux system and log in as root.
2. Insert SATAII 150 Driver Disk
3. In a terminal window, enter the following commands:

    # mount /dev/fd0 /mnt/floppy

    # cd /mnt/floppy

    # sh install

    Note: At the prompt answer Yes to load SATAII 150 driver every time Linux boots.

    # cd ..

    # umount /dev/fd0

SuSE Linux

Prepare a driver diskette:

1. Download the RedHat Linux driver from the Promise website at www.promise.com
2. Extract the contents of the ZIP file on to a formatted floppy disk. Use WinZIP in Windows or unzip in Linux.
3. Label the disk "SATAII 150 Driver Disk".

New Installation

1. Boot the Linux system from the SuSE Linux Installation with CD.
2. When system boots, press F3 for Driver Disk and select the Installation option.

    See the Note below.
3. When "Please insert the Driver Update floppy" displays, insert the SATAII 150 Driver Disk into the floppy drive.
4. When Driver Update Menu appears, select OK then select "back" to return to the installer.
5. Continue with the installation as normal.
6. If you are using SMP system, add a parameter "acpi=off" to "kernel boot parameters" in the Booting menu of Installation Settings.

NOTE: There is a SMP issue on the SuSE Linux SMP kernel. If you encounter problems on SuSE with SMP system, append "acpi=off" parameters into boot loader or select "Installation – ACPI Disabled" on SuSE Linux SMP.

Existing Installation

1. Boot the Linux system and log in as root.
2. Insert SATAII 150 Driver Disk
3. In a terminal window, enter the following commands:

   # mount /dev/fd0 /floppy

   # cd /floppy

   # sh install

   Note: At the prompt answer Yes to load SATAII 150 driver every time Linux boots.

   # cd /

   # umount /floppy

Chapter 4: Partition and Format

In order for your operating system to recognize and work with the disk drives attached to your SATAII150 TX2plus or TX4 controller card, the drives must be partitioned and formatted.

- If your drives were previously partitioned and formatted they are ready to use and you can skip this chapter
- If your drives have not been partitioned and formatted, you must do that job before you can use them

The actions of partitioning and formatting create a file structure on the disk drives with which your operating system can work. In the example below, we show how this is done in Windows. A similar procedure is required for Linux PC's. However, partitioning and formatting in Linux is unautomated, therefore please refer to your system documentation for the exact procedure.
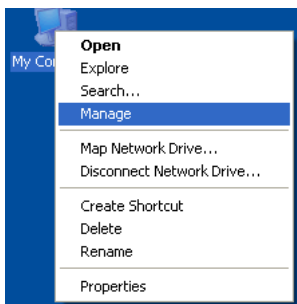
Note

If you plan to boot your computer from this array, go to Windows and Device Driver Installation under the Installation section for instructions. The instructions here are for data arrays only.


1. From the desktop, right-click on the My Computer icon and select Manage from the popup menu. The Computer Management window opens.
2. From the left menu, click on Disk Management. The Disk Management window opens with your new array identified as Disk 1. The Initialize Wizard appears automatically.
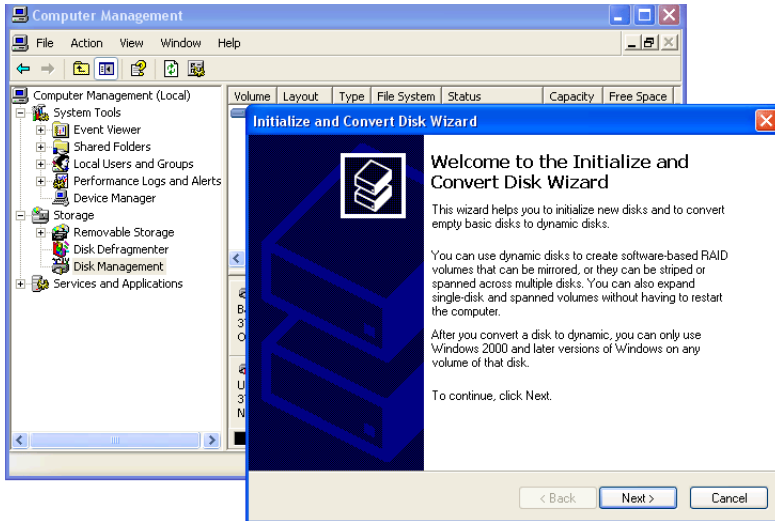
3. Click the Next button to start the Wizard.

4. In the following windows, select Disk 1 to Initialize. Do not select any disks to Convert. Click the Finish button to Initialize the array.
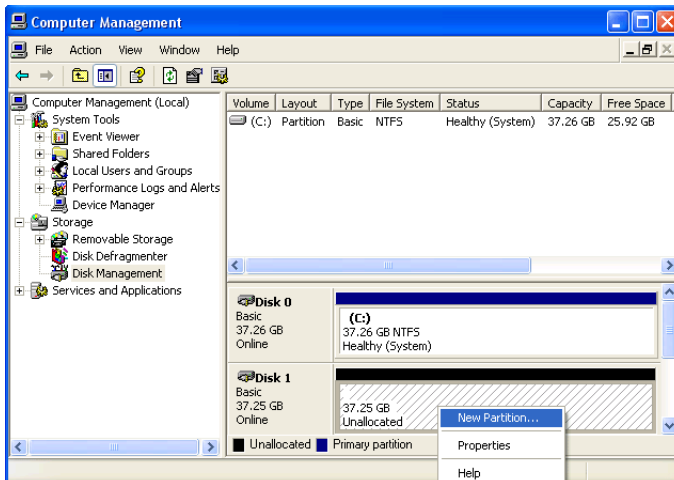
5. Right-click on the Unallocated portion of Disk 1 and select New Partition... from the popup menu. The New Partition Wizard appears.
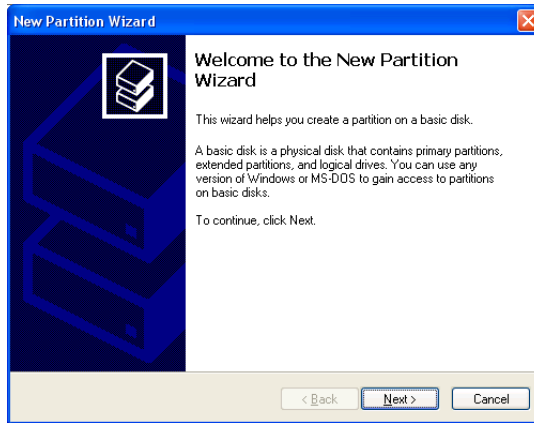
6. Click the Next button to start the wizard.

7. In the following windows, do the following actions. Click Next to move to the next window.

   •   Select Primary Partition

    •   Specify the maximum available partition size in MB

    •   Assign the available drive letter of your choice

    •   Choose Format this partition with the following settings

    •   File system: NTFS

    •   Allocation unit size: Default

    •   Volume label: Enter your choice of name

    •   Do not check "Perform a quick format" or "Enable file and folder compression"

8. Review your selections and click Finish. The New Partition Wizard will disappear while partitioning and formatting begin.

    This process will take some time. The Disk Management window displays the progress.
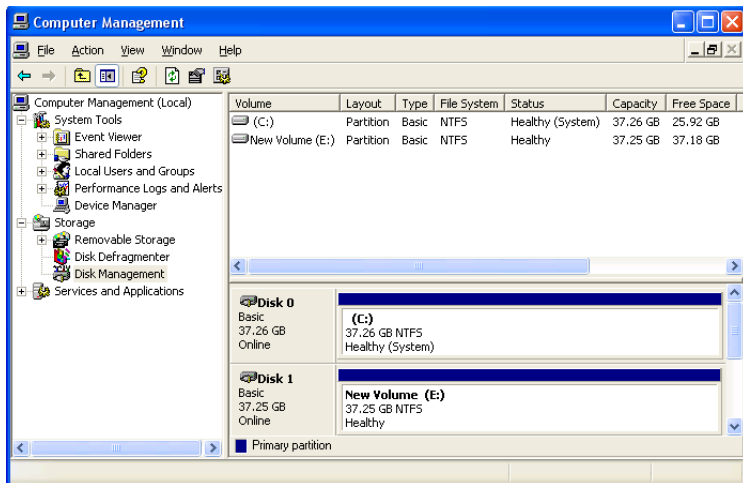
When formatting is complete, your array will appear as a hard drive in the Disk Management window (above) and the My Computer window (below).
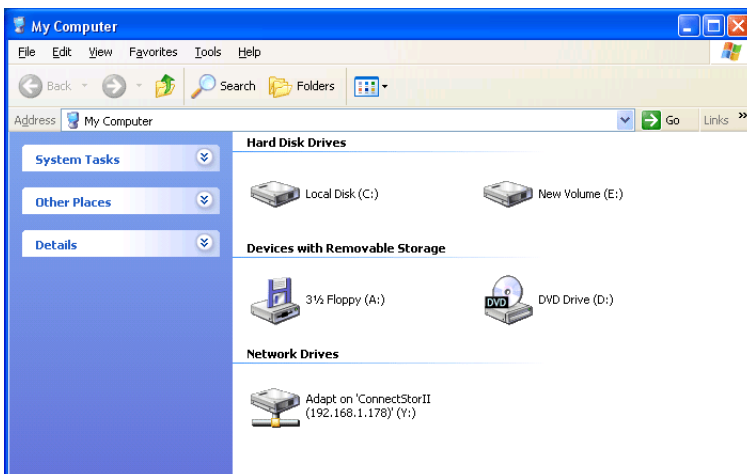
Chapter 5: Troubleshooting & Tips

- Motherboard Issues, below
- System CMOS Issues, page 28
- Drive-Related Issues, page 28
- Operating System-Related Issues, page 29

This section is used to assist with troubleshooting conflicts and SATAII150 TX2 and TX4 installation problems. Also refer to the README.TXT file on the SATAII150 driver diskette for more recent information as well as the PromiseOnline services listed in Appendix AB.

The section is divided into the following categories: Motherboard Issues, System CMOS Issues, Drive Errors, Operating System Errors, and Audio/Video Editing Tips.

Motherboard Issues

Freeing additional IRQ resources

Since the Promise card supports PCI Interrupt sharing, it is possible to use IRQs already assigned to another PCI card. Interrupt Sharing is not supported with onboard IDE controllers. If the onboard IDE controller(s) are not used, you may disable the controllers to free IRQ 14 and/or 15.

Configuring PCI IRQ resources

Setting the IRQ for a particular PCI slot will be different depending on the motherboard BIOS. This setting is usually made in the PCI Configuration and/or Plug and Play (PnP) section of the motherboard BIOS setup. There are three common methods that motherboard BIOS's handle assignment of IRQs to PCI slots:

- Specifically assigning an IRQ to a particular slot - You can tell the motherboard to use IRQ 10 for PCI slot 1, IRQ 11 for PCI slot 2, etc.
- Listing which IRQs are available to be assigned to the PCI slots – This BIOS has an option where you specify 1st Available IRQ, 2nd Available IRQ, etc. The BIOS then scans the PCI slots for PCI cards and assigns these IRQs in the order that it finds the PCI cards.

Consult your motherboard manual for information that is specific to your motherboard.

Intermittent data problems

Overclocking the PCI bus may cause the system to hang or data corruption. If you experience either of these problems and you are overclocking the PCI bus, set the PCI bus back to its normal setting to see if this is causing the errors.

System CMOS Issues

Set Motherboard CMOS Boot sequence to boot to SATAII150 Serial ATA Controller

On some Motherboard BIOS, it is necessary to set the Boot sequence to SCSI, A:, C: since the Promise card is identified as a SCSI card.

Motherboard CMOS displays C: or D: drive failure during startup

See the Drive-Related Errors section.

Using an Onboard IDE Card with SATAII150 Serial ATA Controller

If an onboard IDE controller is installed with hard disks, enable support in the Motherboard Standard CMOS Setup for the drives. Note that the onboard IDE hard drives will then be the bootable hard disk unless the system BIOS has a boot sequence setting with the option to specify booting to a different device.

Drive-Related Issues

Drives cannot be formed into an array

The SATAII150 Controller supports Serial ATA disk drives but it does not support RAID. Therefore you cannot build a RAID array with this product.

System CMOS displays C: or D: drive failure during Startup

Do not reference C: or D: in the Motherboard Standard CMOS for drives attached to the SATAII150 Serial ATA Controller. Only enter drive information in the Motherboard CMOS for drives attached to the onboard IDE controller.

Operating System-Related Issues

Promise Windows driver does not appear in Device Manager

Windows may already be listing the controller under Other Devices instead of the Hard disk controllers section. In Device Manager under Other Devices to see if it lists a PCI Card or RAID Controller. If so, highlight this listing and click on the Properties button then click on the Driver tab. Depending on your version of Windows, choose either Change Driver or Update Driver. Follow the on-screen prompts to complete installation of the driver. If Windows asks if you want to test if the device can be removed safely, click on CANCEL. Reboot the system to complete installation of the driver.

"Inaccessible Boot Device" Message Appears During Floppyless Install of Windows NT, , 2000, or XP or Server 2003

The F6 key was not pressed at the appropriate time. Reboot the system, and press the F6 key when the message "Press F6 if you need to install third party SCSI or RAID driver" appears in Windows 2000, XP or Server 2003.

"No Hard Drives Found" Message Appears During CD-ROM Install of Windows NT, 2000, or XP or Server 2003

The F6 key was not pressed at the appropriate time. Reboot the system, and press the F6 key when the message "Press F6 if you need to install third party SCSI or RAID driver" appears in Windows 2000, and XP or Server 2003.

Chapter 6: Support

- Frequently Asked Questions, below
- Contact Technical Support, page 34
- Limited Warranty, page 36
- Return Product for Repair, page 37

Frequently Asked Questions

This section lists frequently asked questions involving pre-installation, drive issues, installation, and post-installation.

Pre-Installation

(Speed, Device Types, Capacity, Cabling)

What kind of hard drives can I use with the SATAII150 Controller card?

You can use any Serial ATA disk drive(s) to create arrays on the SATAII150 Serial ATA Controller card. Use matching drives for multiple-drive arrays to maximize capacity usage as well as performance.

Will ACPI work with disk drives on the SATAII150 Controller card?

Yes.

Can I use ATAPI devices on the SATAII150 Controller card?

Yes. The SATAII150 Serial ATA Controller card supports Serial ATAPI devices.

Will the SATAII150 Controller card work with 66MHz PCI bus speed?

Yes, the SATAII150 Serial ATA Controller card is designed to accommodate the newer PCI bus speed and is backward compatible with 33MHz speeds.

How can I change the resources that the SATAII150 uses?

The SATAII150 Serial ATA Controller card is fully PnP. This means all the resources that it uses are given to it by the PnP BIOS on the motherboard. The SATAII150 Controller supports IRQ sharing, but this will not work unless ALL the concerned devices support the feature. If your motherboard allows you to control the assignment of these resources, you may be able to remedy the problem by:

- Changing the IRQ assignments to the PCI slots in the motherboard BIOS during boot up.
- Reset the configuration data in your CMOS. This is usually an option in the PnP section of your CMOS.

• Otherwise, switch the SATAII150 card to a different PCI slot.

Drive Issues

Do the disk drives on the SATAII150 Controller have to be the same size?

The disk drives connected to the SATAII150 Serial ATA Controller card do not have to be the same size, make or model.

I already have an older Promise controller. Can I move the disk drives to my new SATAII150 controller?

Yes, provided your drives are Serial ATA disk drives.

If I have a problem with one of the drives on the SATAII150 Controller, how can I low-level format it to correct the problem?

Do NOT do this. Low-level formatting is unnecessary and generally does not correct problems commonly experienced. If you think the disk drive is faulty, run the drive manufacturer's diagnostic utility on it.

Errors such as bad sectors or ECC/CRC failure are best remedied by completely replacing the drive. For this reason, do NOT low-level format the drives attached to the SATAII150 controller.

Do I have to install disk management software on my array in order to access the full storage capacity of drives?

No! Disk management software will only complicate things. Your disk drives should be fully addressable by your OS as they are. Consult your OS documentation about partitioning larger drives.

What system BIOS setup settings do I use for the drives on the SATAII150 Serial ATA Controller card?

None. The drives on the SATAII150 Controller are supported by the Promise BIOS and/or OS drivers, not by your system BIOS.

Installation Issues

(Capacity, Booting)

How can I change the system boot sequence in order to boot from drives on the SATAII150 Controller?

The boot sequence is controlled by the system BIOS. As far as the system BIOS is concerned, the SATAII150 Serial ATA Controller and its defined arrays are categorized as a SCSI device. This allows you to set the boot sequence in your BIOS setup utility to boot from SCSI first, rather than IDE.

If there are multiple SCSI add-in controllers in the system, then the boot sequence among is determined by their PCI slot priority. PCI slot #1 will be first, slot #2 second, etc. If you want to boot from the array, put the SATAII150 Controller in the PCI slot where it will be accessed before the other SCSI controllers.

How can I change the boot sequence between a PCI SCSI card and the SATAII150 Controller?

Since all PCI devices are PnP, it is difficult to determine which device is addressed first. Some newer motherboard BIOSes have advanced options that identify devices and allow you to select which device will be assigned resources first. Otherwise you may have to physically switch the device cards on the PCI slots so that the boot device is in the highest priority slot number, as described in the previous answer.

Contact Technical Support

Promise Technical Support provides several support options for Promise users to access information and updates. We encourage you to use one of our electronic services, which provide product information updates for the most efficient service and support.

If you decide to contact us, please have the following information available:

- Product model and serial number
- BIOS and driver version numbers
- A description of the problem / situation
- System configuration information, including: motherboard and CPU type, hard drive model(s), ATA/ATAPI drives & devices, and other controllers.

Technical Support Services

Promise Online™ Web Site	http://www.promise.com (technical documents, drivers, utilities, etc.)

North and South America

E-mail Support	support@promise.com
Fax Technical Support	(408) 228-6401 Attention: Technical Support
Phone Technical Support	(408) 228-6402 7:30-5:30pm M-F Pacific Standard Time
If you wish to write us for support:	Promise Technology, Inc. Attn: Technical Support 1745 McCandless Drive Milpitas, CA 95035, USA

Europe, Africa and Middle East

E-mail Support	support@promise.nl
Fax Technical Support	+31 (0) 40 256 9463 Attention: Technical Support
Phone Technical Support	+31 (0) 40 235 2600 8:30-5:00pm The Netherlands Time
If you wish to write us for support:	Promise Technology Europe B.V. Attn: Technical Support Luchthavenweg 81-125 5657 EA Eindhoven, The Netherlands

Pacific Rim

E-mail Support	support@promise.com.tw
Fax Technical Support	+886 3 564 53 13 Attention: Technical Support
Phone Technical Support	+886 3 578 23 95 (ext. 8873) 9:00-5:30pm Taiwan Time
If you wish to write us for support:	Promise Technology, Inc. Attn: Technical Support 2F, No. 30, Industry E. Rd. IX Science-based Industrial Park Hsinchu, Taiwan, R.O.C.

China

E-mail Support	support-china@promise.com
Fax Technical Support	+86 10 6872 3940 Attention: Technical Support
Phone Technical Support	+86 10 6872 3941 9:00-6:00pm China Time
If you wish to write us for support:	Promise Technology China Attn: Technical Support Room 3115, No. 11 South Zhong Guan Cun Street Hai Dian District, Beijing 100081 P.R. China

Limited Warranty

Promise Technology, Inc. ("Promise") warrants that for three (3) years from the time of the delivery of the product to the original end user:

a)   the product will conform to Promise's specifications;

b)   the product will be free from defects in material and workmanship under normal use and service.

This warranty:

a)   applies only to products which are new and in cartons on the date of purchase;

b)   is not transferable;

c)   is valid only when accompanied by a copy of the original purchase invoice.

d)   Is not valid on spare parts, fans, and power supplies

This warranty shall not apply to defects resulting from:

a)   improper or inadequate maintenance, or unauthorized modification(s), performed by the end user;

b)   operation outside the environmental specifications for the product;

c)   accident, misuse, negligence, misapplication, abuse, natural or personal disaster, or maintenance by anyone other than a Promise or a Promise-authorized service center.

Disclaimer of other warranties

This warranty covers only parts and labor, and excludes coverage on software items as expressly set above.

Except as expressly set forth above, Promise DISCLAIMS any warranties, expressed or implied, by statute or otherwise, regarding the product, including, without limitation, any warranties for fitness for any purpose, quality, merchantability, non-infringement, or otherwise. Promise makes no warranty or representation concerning the suitability of any product for use with any other item. You assume full responsibility for selecting products and for ensuring that the products selected are compatible and appropriate for use with other goods with which they will be used.

Promise DOES NOT WARRANT that any product is free from errors or that it will interface without problems with your computer system. It is your responsibility to back up or otherwise save important data before installing any product and continue to back up your important data regularly.

No other document, statement or representation may be relied on to vary the terms of this limited warranty.

Promise's sole responsibility with respect to any product is to do one of the following:

a)   replace the product with a conforming unit of the same or superior product;

b)   repair the product.

Promise shall not be liable for the cost of procuring substitute goods, services, lost profits, unrealized savings, equipment damage, costs of recovering, reprogramming, or reproducing of programs or data stored in or used with the products, or for any other general, special, consequential, indirect, incidental, or punitive damages, whether in contract, tort, or otherwise, notwithstanding the failure of the essential purpose of the foregoing remedy and regardless of whether Promise has been advised of the possibility of such damages. Promise is not an insurer. If you desire insurance against such damage, you must obtain insurance from another party.

Some states do not allow the exclusion or limitation of incidental or consequential damages for consumer products, so the above limitation may not apply to you.

This warranty gives specific legal rights, and you may also have other rights that vary from state to state. This limited warranty is governed by the State of California.

Your Responsibilities

You are responsible for determining whether the product is appropriate for your use and will interface with your equipment without malfunction or damage. You are also responsible for backing up your data before installing any product and for regularly backing up your data after installing the product. Promise is not liable for any damage to equipment or data loss resulting from the use of any product.

Return Product For Repair

If you suspect a product is not working properly, or if you have any questions about your product, contact our Technical Support Staff through one of our Technical Services, making sure to provide the following information:

- Product model and serial number (required)
- Return shipping address
- Daytime phone number
- Description of the problem
- Copy of the original purchase invoice

The technician will assist you in determining whether the product requires repair. If the product needs repair, the Technical Support Department will issue an RMA (Return Merchandise Authorization) number.

Return ONLY the specific product covered by the warranty (do not ship cables, manuals, diskettes, etc.), with a copy of your proof of purchase to:

USA and Canada:	Promise Technology, Inc. Customer Service Dept. Attn.: RMA # _____ 1745 McCandless Drive Milpitas, CA 95035
Other Countries:	Return the product to your dealer or retailer. Contact them for instructions before shipping the product.

You must follow the packaging guidelines for returning products:

- Use the original shipping carton and packaging
- Include a summary of the product's problem(s)
- Write an attention line on the box with the RMA number
- Include a copy of proof of purchase

You are responsible for the cost of insurance and shipment of the product to Promise. Note that damage incurred due to improper transport or packaging is not covered under the Limited Warranty.

When repairing returned product(s), Promise may replace defective parts with new or reconditioned parts, or replace the entire unit with a new or reconditioned unit. In the event of a replacement, the replacement unit will be under warranty for the remainder of the original warranty term from purchase date, or 30 days, whichever is longer.

Promise will pay for standard return shipping charges only. You will be required to pay for any additional shipping options (such as express shipping).